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10/768,885	01/30/2004	Peter Weiss	GR03P03277	7306

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EXAMINER

LOFTIN, CELESTE

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/768,885	Applicant(s) WEISS, PETER	
	Examiner Celeste L. Loftin	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-6 and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Alperovich et al. (Alperovich), **U.S. Patent 5,924,041**.

Regarding claim 1, Alperovich discloses a method for handling a location-based service in a limited geographic area for a plurality of subscribers (reads on mobile stations which have membership in the dispatch groups) (**col. 8 lines 29-30**), wherein the limited geographic area (reads on a dispatch group call which is limited to a certain geographical location or locations) (**col. 9 lines 28-29**) is served by at least two devices for determining a geographic position of mobile radio users (i.e. MSC's) (**col.7 lines 47-48 and figure 6 elements 405A and 405B**), the method which comprises:

receiving, in a central network element (i.e. HLR) , an inquiry (i.e. a call) from the location-based service concerning an identity of the subscribers in the limited geographic area (reads on when a dispatcher calls this number the cellular network access the HLR database to determine all mobile stations) (**col. 6 lines 58-60**);

requesting, with the central network element (i.e. HLR) , a current information item about the subscribers active in the limited geographic area from the at least two devices for determining the geographic position of mobile radio users (reads on the

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HLR, after recognizing the incoming call (the request) to the dispatch group call, sends the international mobile subscriber identity for each of the mobile stations to the respective MSC and the MSC's return a mobile station routing number for each of the mobile stations which they are servicing) (**col. 7 lines 43-53**); and

delivering, with the central network element, the information to the location-based service (reads on the HLR forwards the mobile station routing number received from each MSC to the GMS and then the GMS establishes a connection with MSC serving mobile stations) (**col. 8 line 23-30**).

Regarding claim 2, Alperovich discloses the method according to claim 1, wherein a first device for determining the geographic position of mobile radio users is located within an infrastructure of a first mobile radio network and a second device for determining the geographic position of mobile radio users is located within an infrastructure of a second mobile radio network (reads on the mobile switching centers 405A-B, return a mobile station routing number for each of the mobile station 155A-D which they are servicing (**col. 7 lines 49-53**)).

Regarding claim 3, Alperovich discloses the method according to claim 1, which comprises, upon receiving an inquiry in the central network element (reads on the HLR, after recognizing the incoming call to be a dispatched group) (**col. 7 lines 43-45**), checking whether a desired result is already stored as a result of a previous inquiry (when the mobile station moves to another location area the visitor location register updates the entry, (when updating the VLR a check must be done in order to know that an entry has already been stored)) (**col. 3 lines 55-58**) and the result can be delivered

to the location-based service (the HLR forwards the mobile station routing number to the gateway mobile switching center and a connection is made with all the serving mobile stations in the dispatched group) (**col. 8 lines 25-30**), or the central network element must request the desired result from the at least one device for determining the geographic position of mobile radio users.

Regarding claim 4, Alperovich discloses the method according to claim 3, which comprises providing a result requested by the central network element from a device for determining the geographic position of mobile radio users with an additional identification (the HLR (which lists mobile stations located in the service area), after recognizing the incoming call sends the subscriber identity (**i.e. additional information**) for each mobile station) (**col. 3 lines 44-45 and col. 7 lines 43-46**), and reusing the stored result for one or more further inquiries in dependence on the additional identification (the HLR (which contains a list mobile stations located in the service area) forwards the subscriber identity to the MSC's) (**col. 7 lines 43-46**).

Regarding claim 5. The method according to claim 1, which comprises, upon receiving an inquiry in the central network element (reads on when a dispatcher calls this number the cellular network access the HLR database to determine all mobile stations) (**col. 6 lines 58-60**), first checking whether a desired inquiry has already been processed (when the mobile station moves to another location area the visitor location register updates the entry, (when updating the VLR a check must be done in order to know that an entry has already been stored)) (**col. 3 lines 55-58**) or a result of a previous inquiry is still outstanding, and, after receiving the result of the previous inquiry,

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a current inquiry can also be answered (the HLR receives an inquiry (i.e. a call) and sends the subscriber identity to the MSC's (current inquiry), which forward the routing number for the mobile stations back to the HLR) (**col. 7 lines 43-53**).

Regarding claim 6, Alperovich discloses the method according to claim 5, which comprises providing a result requested by the central network element from a device for determining the geographic position of mobile radio users with an additional identification (the HLR (which lists mobile stations located in the service area), after recognizing the incoming call sends the subscriber identity (**i.e. additional information**) for each mobile station) (**col. 3 lines 44-45 and col. 7 lines 43-46**), and reusing the stored result for one or more further inquiries in dependence on the additional identification (the HLR (which contains a list mobile stations located in the service area) forwards the subscriber identity to the MSC's) (**col. 7 lines 43-46**).

Regarding claim 8, Alperovich discloses the method according to claim 1, which comprises causing the central network element to collect the results of the inquiries from the at least two devices for determining the geographic position of mobile radio users and, as soon as all interrogated devices for determining the geographic position of mobile radio users have answered (when a call is placed from the MSC it passes the ISDN number to the GMS which then passes the ISDN number to the HLR, the HLR determines which MSC is servicing the mobile stations, and then a series of requests and responses until the call is established) (**col. 4 lines 35-60**), to combine the answers and to deliver the result to the location-based service (reads on the HLR forwards the

mobile station routing number received from each MSC to the GMS and then the GMS establishes a connection with MSC serving mobile stations) (**col. 8 line 23-30**).

Regarding claim 9, Alperovich discloses the method according to claim 1, wherein the inquiry is defined to cover:

a first geographic region (i.e. service area) for which a first central network element (i.e. MSC) is responsible (the geographical area serviced may be subdivided into a 4 service areas, each service area having its own MSC) (**col. 2 lines 58-64**);

a second geographic region (i.e. service area) for which a second central network element (i.e. MSC) is responsible (the geographical area serviced may be subdivided into a 4 service areas, each service area having its own MSC) (**col. 2 lines 58-64**); and

the first central network element receives an inquiry and forwards the inquiry for the second geographic region to the second central network element (a mobile phone makes a call and the MSC (element 111) sends the routing number to the GMS which sends it to the HLR to determine which MSC (element 110) is servicing the called party, and after the determination the call is established) (**co.4 lines 35-60**).

Regarding claim 10, Alperovich discloses the method according to claim 1, which comprises storing results of inquiries as a list in the central network element (the HLR contains an exhaustive list of all subscribers to the cellular network) (**col. 54 lines 35-36**) and delivering only an identification of the list back to the location-based service (as

the mobile station moves to a different service area the database in the HLR is updated and the VLR in the MSC deletes old entry and adds the updated information) (**col. 3 lines 55-60**).

Regarding claim 11, Alperovich discloses the method according to claim 10, which comprises receiving or determining with the central network element characteristics of the subscribers determined from the devices for determining the geographic position of mobile radio users (the HLR upon receiving a mobile subscriber ISDN, recognizes the call as a dispatch group call which is limited to a certain geographical location) (**col. 9 lines 25-29**), collecting and storing the characteristics for later use (as the mobile station moves to a different service area the database in the HLR is updated and the VLR in the MSC deletes old entry and adds the updated information) (**col. 3 lines 55-60**), and delivering the characteristics back to the location-based service together with the identification of the list (the HLR sends the international mobile subscriber identity for each of the mobile stations) (**col. 7 lines 43-47**).

Regarding claim 12, Alperovich discloses the method according to claim 1, wherein the central network element contains a correlation between the identity of at least one subscriber for whom a location information is requested and the network node (i.e. base station) responsible for the subscriber and (the MSC receives the routing number originating from the HLR, the controllers access the VLR to find the correct MSC to connect with, then it establishes a call with the using the base station) (**col.8 lines 23-25, 32-35, and 40-43**), when the central network element receives an inquiry message from the location-based service, the central network element distributes the

inquiry to each identity stored for the network node (the MSC receives the routing number originating from the HLR, the controllers access the list of all mobile stations serviced by the mobile switching centers VLR to find the correct MSC to connect with, and continues to establish calls until all mobile stations in the service area have been contacted) **(col.8 lines 23-25, 32-35, and 40-43).**

Regarding claim 13, Alperovich discloses a method of providing location-based services within a limited geographic area to a plurality of subscribers, which comprises:

transmitting an inquiry from a location-based service to a central network element concerning an identity of the subscribers in the limited geographic area (reads on the HLR, after recognizing the incoming call (the request) to the dispatch group call, sends the international mobile subscriber identity for each of the mobile stations) **(col. 7 lines 43-53);**

requesting information concerning the identity of the subscribers in the limited geographic area from at least two devices serving the limited geographic area for determining a geographic position of mobile radio users (reads on the HLR, after recognizing the incoming call (the request) to the dispatch group call, sends the international mobile subscriber identity for each of the mobile stations to the respective MSC and the MSC's return a mobile station routing number for each of the mobile stations which they are servicing) **(col. 7 lines 43-53);**

receiving a current information item in the central network element from the at least two devices for determining the geographic position of mobile radio users, about

the subscribers active in the limited geographic area (reads on when a dispatcher calls this number the cellular network access the HLR database to determine all mobile stations) (**col. 6 lines 58-60**); and

forwarding the information from the central network element to the location-based service, and providing the location-based services to the subscribers in the limited geographic area (reads on the HLR forwards the mobile station routing number received from each MSC to the GMS and then the GMS establishes a connection with MSC serving mobile stations) (**col. 8 line 23-30**).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.

5. Claim 7 and 41-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Alperovich et al. (Alperovich), **U.S. Patent 5,924,041** in view of Reed et al. (Reed) **U.S. Publication 10,255,552**.

Regarding claim 7, Alperovich discloses The method according to claim 6, but fails to disclose wherein the additional identification is at least one element selected from the group consisting of a timestamp and information on an accuracy of the inquiry.

In a similar field of endeavor, Reed discloses wherein the additional identification is at least one element selected from the group consisting of a timestamp and information on accuracy of the inquiry (reads on in transferring acquired user information and other defined data) (**paragraph [00113]**).

At the time of invention it would have been obvious to one of ordinary skill in the art to further modify Alperovich to include wherein the additional identification is at least one element selected from the group consisting of a timestamp and information on an accuracy of the inquiry. Motivation for this modification would have been to ensure for billing purposes that the length of the call and other pertinent data is precise.

Regarding claim 14, Alperovich A device for handling inquiries of a location-based service for a limited geographic area served by at least two devices for determining a geographic position of mobile radio users, for a plurality of subscribers in the limited geographic area, comprising:

means for receiving inquiries, sent by the location-based service, about an identity of subscribers in the limited geographic area (reads on the HLR, after recognizing the incoming call (the request) to the dispatch group call, sends the international mobile subscriber identity for each of the mobile stations) (**col. 7 lines 43-53**);

means for sending a request for current information about the subscribers active in the limited geographic area to a device for determining the geographic position of mobile radio users (reads on the HLR, after recognizing the incoming call (the request)

to the dispatch group call (from the mobile station), sends the international mobile subscriber identity for each of the mobile stations) (**col. 7 lines 43-53**);

means for receiving responses from the interrogated device for determining the geographic position of mobile radio users (reads on the HLR forwards the mobile station routing number received from each MSC to the GMS and then the GMS establishes a connection with MSC serving mobile stations) (**col. 8 line 23-30**);

means for processing the responses to form an inquiry result (the controller continues to establish calls until all mobile stations serviced by the mobile switch center has been contacted and then the controller conferences them together (meaning that the mobile stations must have a processor that allows them to be a part of the conference)) (**col.8 lines47-51**); and

means for sending the inquiry result to the location-based service (reads on the HLR forwards the mobile station routing number received from each MSC to the GMS and then the GMS establishes a connection with MSC serving mobile stations) (**col. 8 line 23-30**).

Regarding claim15, Alperovich discloses the device according to claim 14, which further comprises:

means for storing the responses from the interrogated device for determining the geographic position of mobile radio users and an additional identification of the responses (as the mobile station moves to a different service area the database in the

HLR (which contains a list of all mobile subscribers) is updated and the VLR in the MSC deletes old entry and adds the updated information) (**col. 3 lines 55-60**); and

means for comparing a new inquiry with the responses already stored when the mobile station moves to another location area the visitor location register updates the entry, (when updating the VLR a check must be done in order to know that an entry has already been stored)) (**col. 3 lines 55-58**).

Regarding claim 16, Alperovich discloses the device according to claim 14, which further comprises:

means for storing the responses from the interrogated device for determining the geographic position of mobile radio users and sending an unambiguous identification (i.e. location) of the responses (the HLR contains a database listing of all subscribers and their last known geographical location, when the mobile station changes location the HLR is updated and the VLR (located in the MS) deletes its entry and uses the updated data) (**col.3 lines 33-38 and 52-60**); and

means for using the unambiguous identification of the answers in subsequent messages from the location-based service (the MSC receives the routing number originating from the HLR, the controllers access the list of all mobile stations serviced by the mobile switching centers VLR to find the correct MSC to connect with, and continues to establish calls until all mobile stations in the service area have been contacted) (**col.8 lines 23-25, 32-35, and 40-43**).

Conclusion

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muhonen et al. U.S. Publication 10/221,618 discloses service provision in a communication system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celeste L. Loftin whose telephone number is 571-272-2842. The examiner can normally be reached on Monday thru Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JON K. CONTEE
PATENT EXAMINER

CL: